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Low-temperature dehydration of gypsum single crystals

Khasanov R., Nizamutdinov N., Khasanova N., Gubaĭdullin A., Vinokurov V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

On the basis of the analysis of the electron spin resonance spectrum of the SO 3 - radical ion, it is established that the transformation of gypsum (CaSO4 · 2H2O) into bassanite (CaSO4 · 0.5H2O) with partial removal of water molecules occurs through the formation of an anhydrous metastable phase. This phenomenon, reflecting the processes of recrystallization of materials of this class, serves as the scientific basis for the production of binders from sulfate mineral associations. © 2008 Pleiades Publishing, Ltd.

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